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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,740	04/09/2004	David Mills	DKT 03050A (BW1-00086)	1865
7590	10/26/2006		EXAMINER	
BorgWarner Inc. Patent Administrator 3850 Hamlin Road Auburn Hills, MI 48326-2872			FRISTOE JR, JOHN K	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/821,740

Applicant(s)

MILLS ET AL.

Examiner

John K. Fristoe Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/29/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection. Since the new grounds of rejection were not necessitated by Applicants' amendment the instant Office action remains non-final.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8, 14, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the examiner if the "wing member" recited in line 3 of each claim is referring to the "flying buttress" or another structure in the valve.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 9-13, 15-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,336,470 (Zapf) in view of U.S. Pat. No. 3,856,260 (Giordana). Zapf discloses a solenoid fluid control valve comprising a fluid control body (2), a central cavity (4), a pressure supply passage (P), a radially pressure control passage (A), a feed supply tube (64), at least one flying buttress (56), a valve seat (54), a ball valve (6), a valve receiving

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chamber (within element 64), a solenoid (16) for opening the valve (6) in response to a signal (col. 3, lines 63-67), a coil (24) having radially stepped inner diameters, a bobbin (32a, 32b), a casing member (20), a flux tube (portion of element 20 adjacent element 28 in figure 1) having a support portion, a C-shaped integrally molded retention ring (portion of element 22 surrounding element 28, that portion of the element does not completely surround element 28 in figure 1 and therefore is C-shaped), an armature (14), a pressure relief vent (46), a pole piece (40), and a control rod (12) but lacks the valve seat made of plastic. Giordana teaches a solenoid valve comprising a solenoid (3), a ball member (5), and a plastic valve seat (col. 3, lines 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the solenoid fluid control valve of Zapf by using a plastic seat member as taught by Giordana in order to improve the sealing at the valve seat and to reduce the weight of the total weight of valve assembly.

Regarding the "press fit" recited in claims 1, 10, and 16, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

6. Claims 8, 14, and 20 as far as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,336,470 (Zapf) in view of U.S. Pat. No. 3,856,260 (Giordana) as applied to claims 6, 10, and 16 above, and further in view of engineering expedient. Zapf discloses a solenoid fluid control valve comprising a fluid control body (2), a central cavity (4), a pressure supply passage (P), a radially pressure control passage (A), a feed supply tube (64), at least one flying buttress (56), a valve seat (54), a ball valve (6), a valve

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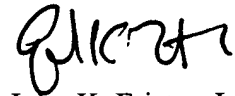
receiving chamber (within element 64), a solenoid (16) for opening the valve (6) in response to a signal (col. 3, lines 63-67), a coil (24) having radially stepped inner diameters, a bobbin (32a, 32b), a casing member (20), a flux tube (portion of element 20 adjacent element 28 in figure 1) having a support portion, a C-shaped integrally molded retention ring (portion of element 22 surrounding element 28, that portion of the element does not completely surround element 28 in figure 1 and therefore is C-shaped), an armature (14), a pressure relief vent (46), a pole piece (40), a control rod (12), and a plastic valve seat but lacks the upper surfaces of at least one wing member adjacent the pole piece is maintained within a tolerance of  $\pm 0.025$  mm. One of ordinary skill in the art of valve design would manufacture a buttress member having an acceptable size tolerance, such as  $\pm 0.025$  mm, so that the valve pieces when assembled will fit together. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the solenoid fluid control valve of Zapf by maintaining a tolerance of  $\pm 0.025$  of the upper surfaces of the flying buttress member as an engineering expedient in order for the flying buttress to fit within the valve bore during assembly.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926. The examiner can normally be reached on Monday-Friday, 7:00 a.m.-4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric S. Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John K. Fristoe Jr.  
Examiner  
Art Unit 3753

JKF



**ERIC KEASEL**  
**SUPERVISORY PATENT EXAMINER**  
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